s22(1)(a)(ii)

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 Sent:
 Monday, 4 March 2024 10:29 PM

 To:
 Solomon, Joseph; s22(1)(a)(ii)

Cc: s22(1)(a)(ii)

Subject: FW: Polestar submission to the NVES impact analysis consultation

Attachments: 240304-Polestar NVES submission.pdf

Follow Up Flag: Follow up **Flag Status:** Flagged

Good evening gents

Just FYI Polestar submitted the attached to the NVES impact analysis consultation tonight. The submission is strongly supportive of the Government's preferred option. We'd be happy to discuss with you in more detail. I've cc'd Laurissa from Polestar for your information.

Many thanks

s22(1)

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Sent: Monday, March 4, 2024 10:23 PM To: s22(1)(a)(ii) @infrastructure.gov.au

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Subject: Polestar submission to the NVES impact analysis consultation

Good evening

Please find attached Polestar's submission to the NVES impact analysis consultation. The submission is very supportive of the Government's preferred Option and reinforces that with relevant recent data points.

Please let me know if you need any additional information and we will be happy to assist.

Regards

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Polestar

Polestar Australia Response to the New Vehicle Emissions Standard Consultation Impact Analysis

General comments:

Polestar was founded at a time where the impact of traditional vehicle manufacturing was well known, and well understood. As a young company, Polestar is legacy-free, challenging old notions, leading with transparency, and embracing the potential of exponential technology.

Through its Lifecycle Assessment (LCA) reports Polestar has demonstrated that there is much to do in addressing greenhouse gas (GHG) emissions over the lifetime of an electric vehicle (EV). But equally, with a dedicated focus on reducing emissions in the EV supply chain, distribution, and at end-of-life, EVs already offer the industry a scalable climate solution.

The Polestar 0 project is Polestar's ambition is to create a truly climate neutral car without offsetting. But cars are complex, they consist of tens of thousands of components and rely on complex channels of suppliers and sub manufacturers. Making a car climate neutral is therefore not only an extremely important challenge but an extremely difficult one. Understanding and accepting the challenge is the first step, getting all the way will require *collective action* across the industry¹.

Polestar Australia welcomes this latest consultation from the Australian Government in support of the introduction of a future New Vehicle Emissions Standard (NVES). Around 85 per cent of the global new car market is covered by some form of emissions standard.

While globally fuel efficiency improvements for new passenger vehicles has doubled in the last 20 years, more work is needed to ensure that improvements continue.

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 $^{^{1}\,\}underline{\text{https://www.polestar.com/au/news/polestar-0-project-open-call-for-collaboration-around-sustainability/}$

As the International Council on Clean Transportation (ICCT) identified, more than 2 billion internal combustion engine (ICE) passenger motor vehicles are projected to be built between now and 2050. Without further efficiency standards in place, the cumulative CO₂ emissions from the global light vehicle are projected to be 255 gigatons. In contrast, with further efficiency standards in place, including from countries like Australia adopting new standards, the forecast CO₂ emissions abatement is calculated at 38 gigaton globally. Put another way, this is equivalent to the total global emissions in 2017.²

Australia remains one of only a handful of countries without a compliance standard for its light vehicle fleet. The transport sector made up 19% of Australia's emissions in 2022; passenger cars and light commercial vehicles alone contributed 60% of Australia's transport emissions and over 10% of Australia's total emissions.³

With transport emissions forecast to be Australia's largest source of emission by 2030, Australia has a clear role to play and must catch up with the rest of the developed world. Establishing transparent and robust new vehicle emission standards is a natural extension of Australia's commitment to stronger action on climate change, and particularly its 43% below 2005 levels by 2030 and net zero 2050 commitments.

With the right policy settings through the establishment of a strong NVES, the Australian Government can not only meet - but beat - efforts already taken around the world to drive down the tailpipe emissions.

As a nation solely reliant on imported light vehicles, Australia is a technology taker. The regulatory framework consequently bears a greater responsibility in establishing strong signals for both car manufacturers and consumers, as domestically developed solutions and/or mitigation is unlikely to deliver substantive emissions reduction.

² https://www.youtube.com/watch?v=hB5f-LSxN3E&ab_channel=CleanTransport

³ https://www.dcceew.gov.au/energy/transport

⁴ https://www.dcceew.gov.au/climate-change/publications/australias-emissions-projections-2022

As the ICCT identifies, this positions Australia well to introduce emissions standards at a similar stringency level as the United States (US) and the European Union (EU) because technologies employed in those markets are now established and mature and are being produced at scale.⁵

As Australia already has substantially higher ICEV emissions than other markets, including the European Union, there is enough potential to lower ICEV emissions by adopting technologies already widely available in the major markets to cost-effectively comply with the standards.⁶

Polestar Australia welcomes the Government's commitment to pursue an aggressive emissions reduction target. Recent history has demonstrated that voluntary standards do not work, with the FCAI acknowledging that its own members had failed to comply with its self-imposed standard when delivering its 2022 compliance results.⁷

Global experience shows that consumer preferences can be accommodated while also committing to strong action on fuel efficiency and tail pipe emissions. The European experience reinforces that strong and robust standards that allow for consumer choice to be maintained are possible and achievable across varied fleet mixes and requirements. With 27 individual member states, the European Union's diverse geography and varied transport requirements have not been an impediment to delivering a regulatory framework that delivers ongoing improvements in fleet-wide emissions reductions.

The ICCT's January 2024 European Vehicle Market Statistics 2023/24 highlights that measured against the Worldwide Harmonized Light Vehicle Test Procedure (WLTP), the average CO2 emissions from new passenger cars in the European Economic Areas declined to 110 g/km in 2022, a decrease of around 6 g/km compared with the 2021 level.

⁵ https://theicct.org/australia-fuel-efficiency-costs-explained-may23/

⁶ ICCT Working Paper 2022-31, Fuel Efficiency Standards to Decarbonise Australia's Light-Duty Vehicles, p.10

⁷ https://www.fcai.com.au/news/index/view/news/792

The European Environment Agency (EEA) has reported that on preliminary data, all manufacturing groups complied with their respective 2022 CO2 targets, and again highlighting that car manufacturers can and will meet legislated requirements when clear expectations are supported by a strong regulatory framework.⁸

Costs versus benefits

Some commentators and car companies have called on a revised phasein and a longer period for the decline rate to meet the US standard, on the basis that the timeframe is too short and that vehicle manufacturers have already locked in forward production. Polestar does not agree with this assertion. In contrast, an aggressive implementation and decline rate can help support the introduction of additional models because it introduces a new competitive tension by drivetrain for manufacturers to help ensure compliance.

As a direct consequence of its emissions standard, the EU's electric passenger car market share reached 22 per cent of total sales in 2023 (a jump from just 3% in 2019), far exceeding the US but significantly behind China's 32% market share. While Norway dominates amongst European Economic Area nations with 65% market penetration, larger EU nations Germany (16%) and France (9%) continue to push ahead on EV adoption.

In a similar vein, some parties argue that a vehicle emissions standard will push the price of new motor vehicles up, with some going so far as to argue it risks increasing the price of new motor vehicles by up to 13% on 2024 prices.

The ICCT undertook analysis of why an emissions standard in the Australian context can be expected to lower the cost of vehicle ownership for Australians. ¹⁰ That analysis concluded that based on comparable markets - the EU and US - consumer benefits accrued from complying with fuel efficiency/emissions standards outweigh any costs that might be associated with it.

⁸ https://eupocketbook.org/wp-content/uploads/2024/01/Pocketbook 202324 Web.pdf

⁹ https://theicct.org/publication/european-vehicle-market-statistics-2023-24/

¹⁰ https://theicct.org/australia-fuel-efficiency-costs-explained-may23/

It identified that any incremental cost associated with fuel efficiency improvements is borne by the manufacturer changing from an old technology to a new one.¹¹

Similarly, the cost of EVs is cited by those resisting the Government's NVES, fanning concern that the implementation of a Standard will only increase pressure on household budgets. A separate 2022 ICCT study assessed the costs and consumer benefits of battery electric vehicles (BEVs), and plug-in hybrids (PHEVs) against conventional vehicles in the US market in the 2022-2035 timeframe and included the entirety of light-duty vehicle sales, including cars, crossovers, SUVs and 'pickups'. ¹²

That study found that typically BEVs have electric ranges between 150 to 400 miles (240-640km), while plug-in hybrid electric vehicles (PHEVs) have ranges of 20 to 70 miles (30-112 km). While it notes that BEVs typically carry upfront costs compared with their petrol or diesel counterparts, it found that as electric vehicle battery and assembly costs progressively decline, the pricing dynamics shift.

Shorter-range BEVs (150 to 200 miles) are expected to achieve price parity by 2024–2026, followed by mid-range BEVs (250 to 300 miles) around 2026–2029, and finally, the longest-range BEVs (350 to 400 miles) around 2029–2032. PHEV prices experience a slower decline due to their smaller battery packs and reliance on combustion powertrains.¹³

Significantly, no PHEVs across any vehicle class are projected to achieve price parity with conventional vehicles within the timeframe. Supporting full electrification will deliver substantial consumer, air quality, and environmental benefits.

In its high-level findings, the ICCT identified that in addition to price parity occurring sooner than commentary would suggest, BEVs provide significant operating cost savings to drivers several years before price parity will be achieved.

¹¹ https://theicct.org/australia-fuel-efficiency-costs-explained-may23/

¹² https://theicct.org/wp-content/uploads/2022/10/ev-cost-benefits-2035-oct22.pdf

¹³ https://theicct.org/australia-fuel-efficiency-costs-explained-may23/

This is attributed to the lower annual operating costs greatly offsetting BEVs' higher initial purchase price and enable ownership parity several years before initial purchase parity. By 2030, it forecasts that in the US market on average, the individual first-owner consumer savings for new mid-range BEVs purchased will be approximately US\$9,000.¹⁴

In contrast, analysis from November 2023 revealed that car manufacturers had increased prices in Australia by almost 20% on average since April 2020, well above the CPI increase of 3.2%. The largest increases occurred in the light car class with an increase of approximately 25% across entry-level models. The Toyota Yaris rose by almost 38% over the period, from \$15,390 to \$24,800, while at the other end of the spectrum the Jeep Wrangler increased by 42%. In total, ten vehicle importers increased prices in November.¹⁵

These pricing changes reflect the ongoing decision-making process of car makers responding to market forces and changing consumer preferences. The price increases were also mirrored in other markets, and coincide with record profits by leading automotive manufacturers. It also belies that any relatively modest adjustment made to engine technology to account for pollution reducing technology is at best a modest cost compared to price increases for any other reason.¹⁶

Polestar life cycle analysis

Polestar has the ambition to become a climate neutral company by 2040 and strives to be transparent about the climate impact of its vehicles. Since 2020, Polestar has used a Lifecycle Assessment Report (LCA) as a tool used for assessing the carbon footprint of its cars, publishing the full report and the methodology used.

The carbon footprint assessment considers a range of factors including emissions from upstream supplier activities, manufacturing, logistics, the use phase of the vehicles, and the end-of-life phase.

The aim is that this information can be utilised to make informed decisions, for example, on where to put effort in reducing greenhouse gas (GHG) emissions as a company, while

 $^{^{14}}$ ICCT White Paper, Light-Duty Electric Vehicle Costs and Consumer Benefits in the United States, p.III-IV

¹⁵ https://www.goauto.com.au/news/industry-news/prices/significant-new-car-price-rises-in-november/2023-11-02/92351.html

¹⁶ https://premium.goauto.com.au/car-prices-exceed-inflation/

also providing customers with a transparent assessment. The LCA influences everything from material choices to energy sources in factories.

When Polestar introduced its first LCA in 2020 for its Model Year 2021 it compared the climate impact of a Polestar 2 with an equivalent petrol vehicle – the Volvo XC40. Both cars share a platform and are built on the same production line. Despite higher emissions during the production phase, when charged with renewable energy during the 'use' phase, the impact of Polestar 2 was half that of the Volvo XC40.

Since that time, the cradle-to-gate carbon footprint of Polestar 2 has been continuously reduced. For the Model Year 2024 Long range Dual motor variant, the result is a total CO₂e saving of 12%, or 3-tonnes in 3 years. Low-carbon aluminium in wheels and the battery tray, a switch to renewable electricity in the factory, and improved battery chemistry are some of the contributing factors.

Late last year, Polestar published the first LCA for its upcoming SUV, Polestar 4. The LCA reveals that Polestar 4 has the lowest cradle-to-gate carbon footprint of all Polestar cars to date – as low as 19.4 tonnes of CO2e at launch.

Sharing the LCA enables Polestar to demonstrate that electric vehicles offer a sustainable climate solution – one tonne of CO₂e at a time.

However, some of the industry's greatest sustainability challenges occur in the supply chain. The conditions surrounding the extraction and refining of minerals can be both hazardous and exploitative. Polestar is working to mitigate the associated risks by setting strict standards for its suppliers and by improving supply chain transparency.

The Responsible Business Alliance Risk Tool is used to assess countries, regions and potential sustainability risks in the supply chain. The risk factors of particular importance to Polestar include geographical risks, labour and human rights abuses, business ethics, health and safety, and environmental hazards.

In order to safeguard people and planet, greater transparency across the car industry is needed.

Blockchain technology has revolutionised supply chain visibility by offering an unalterable, digital and fully transparent way of tracing materials.

Polestar's partnerships with Circulor and GeeTrace set a precedent for the automotive industry by introducing a solution for mineral tracing. The blockchain technology provided by these partners gives Polestar the ability to track a wide range of raw materials used throughout vehicle and in parts production, particularly any risk materials that may have significant environmental impact or pose potential human rights challenges. Both Circulor (for Polestar 2 and 3) and GeeTrace (for Polestar 4) provide a private blockchain ledger with less energy dependency than public blockchains.

Polestar also works with a number of partners to gain greater insights into its supply chains and to further strengthen its supplier assessments and responsible operations and manage risk.

These partners include the <u>Responsible Business Alliance</u> (incorporating the <u>Responsible Minerals Initiative</u> and <u>Responsible Labour Initiative</u>), <u>Drive Sustainability</u> and <u>Assent</u>.

In the case of Assent, high-conflict minerals such as 3TG (tin, tantalum, tungsten and gold) used in small volumes by many Polestar suppliers can be traced. This enables an assessment of the number of smelters conform with the Responsible Minerals Assurance Process (RMAP) and help stem trade with potential links to armed conflict or human rights abuses.

Comments on the Government's preferred Option B

Polestar Australia supports the fastest possible decarbonisation of our national in-service light vehicle fleet. The average Australian light vehicle ownership is approximately 11 years, and average length of service of vehicles in Australia of approximately 20 years. Therefore, the decarbonisation of the Australian car parc will take years, with full decarbonisation not occurring for several decades. Option C would accelerate this with its aggressive decline rate.

Polestar's preference is for option C given that option's fastest transition and rate of ambition but acknowledges this is also the more costly option for the community, and the Australian Government, to carry.

As an electric-only brand, Polestar recognises there are multiple pathways to decarbonise our vehicle fleet over time, noting that electrification remains the fastest way to remove tailpipe emissions from the vehicle fleet.¹⁷

Reflecting the need to balance an ambitious decarbonisation agenda with community acceptance of that need, Polestar supports the adoption of Option B, which is both ambitious but readily achievable. The target seeks alignment with the US annual decline rate by 2028, following an aggressive commencement and implementation timeframe from January 2025.

¹⁷ This is underscored by the International Energy Agency (IEA), which highlights that more concerted efforts by national governments must be taken to meet their stated ambitions. The IEAs Global Fuel Economy Initiative identifies that despite the commitments of national governments, total fuel efficiency improvements have been significantly lower than the 2.8% yearly fuel economy improvements needed to meet the IEAs target of halving the fuel consumption of new light-duty vehicles by 2030 relative to 2005 levels. To achieve this target will require significantly stronger annual decreases effectively requiring a tripling of the average annual improvement since 2005. See https://www.iea.org/reports/global-fuel-economy-initiative-2021/executive-summary

This is a logical pathway given Australia's existing fleet mix and consumer buying behaviours favouring SUVs and light commercial vehicles (LCVs).

Option B will have the effect of increasing supply and consumer choice among fuel efficient vehicles, including efficient ICE, hybrid, PHEV and EV models. This technology agnostic approach provides flexibility to vehicle manufacturers, providing an opportunity to adjust their model mix and invest in infrastructure to support the transition. An increase in more efficient vehicles will reduce fuel costs, carbon emissions, and air pollution, as well as deliver substantial economic benefit to the Australian economy and community.

The proposed mass limit curve will allow for vehicles of all types to continue to be delivered to the Australian new car market, while breakpoints will minimise the incentive to sell heavier vehicles, and the disincentive to sell lighter vehicles. We support applying the 2022 limit curve settings being applied at commencement of the NVES and that rolling updates to the limit curve will be applied in subsequent years.

While we note that the Government intends to apply the standard to some vehicles above 3.5 tonnes Gross Vehicle Mass, "particularly those that are intended and marketed to be driven by consumers, but for which a heavy vehicle licence is not required (i.e. 'pickup' style utes)", Polestar continues to advocate for an 'intended use' test. Passenger motor vehicle based SUVs and LCV based SUVs serve the same core market and should be assessed accordingly. The intended end application for vehicles (LCV and derivatives) should be considered as part of the Government's consideration given the collective use of these vehicles is increasingly less focused on genuine trade and commercial duty and is intended for predominantly household purposes.

Credits and debits

Polestar supports the Government's proposal that credit banking and trading be available, with an expiry of three years for credits and a two-year timeframe for acquittal of debits. This approach recognises that financial penalties and incentives for OEMs and relevant importers to meet emissions targets are important to drive change in the supply of vehicles into Australian new vehicle fleet.

Polestar recognises the Government's position not to allow super or multiplier credits on the basis that it would slow the adoption of lower emissions vehicles across the fleet. Polestar supports the Government's position not to include other forms of technology credits, such as off-cycle credits or air-conditioning credits.

This helps ensure the system remains as simple and as administratively easy as possible for the Regulator, and for vehicle manufacturers. Air conditioning gases are dealt with under the Montreal Protocol and to include it would constitute a form of double accounting, which should be discouraged.

Implementation timeline

Polestar strongly supports the rapid implementation and aggressive decline rate to bring Australia into alignment with the US. A commencement date of 1 January 2025 is a clear signal that Australia is committed to practical reductions in tailpipe emissions and will enable transport emissions reductions to be included as one of Australia's 2035 Nationally Determined Commitments (NDC) to the UNFCCC next year, bringing transport emissions into that framework for Australia for the first time.

While Polestar supports this move because it ensures that tailpipe emissions will continue to be counted as part of Australia's commitments, we also recognise that the implementation timeline is challenging for some car companies. We echo the concerns of both the Australian Automotive Dealers Association (AADA) and the Motor Trades Association (MTAA) that Original Equipment Manufacturers (OEMs) could be incentivised to stockpile unpopular vehicles to meet their emissions accounting requirements. Any such consideration of this measure would need to ensure that there are appropriate and measured regulatory steps in place to eliminate OEM stockpiling of vehicles, the cost of which would typically be borne by the franchised dealer network.

Other measures

While the scope of the NVES remains focused on tailpipe emissions of new vehicles sold into the Australian new light vehicle market, consumer preference of the sort of vehicles consumers purchase will be the dominant determinant of Australia's vehicle emissions profile for the foreseeable future.

Several factors impact on consumers making an informed choice as to what vehicle they choose. Utility, work, and lifestyle factors all play an important role. However, purchase price remains a significant determinant of a consumer's decision to purchase one type of vehicle over another.

Taxation arrangements continue to be a critical factor as consumers make decisions on which vehicles can be considered for purchase and can be a powerful policy lever to shift consumer preference to lower emissions vehicles.

The cumulative impact of Fringe Benefits Tax (FBT) concessions on LCVs in the Australian fleet is instructive. The introduction of 'dual cab utes' in eligible FBT concessions since 2000 has coincided with the growth in sales of LCVs and their variants, which continue to grow at a faster rate to their passenger motor vehicle equivalents, albeit from a lower base.

Similarly, the implementation of the Government's introduction of FBT concessions in December 2022 to encourage the uptake of electric vehicles saw an immediate uptake in the number of EVs sold into the Australian new car market, with EV sales growing 160% in the full year 2023 compared to 2022.¹⁸

Polestar advocates that Government can overcome consumer barriers and our unique geographic and consumer circumstances with strong supporting policies to encourage consumers into more efficient vehicles working in concert with verifiable emissions targets to drive tailpipe emissions down. Part of this needs to include recognition that other policy levers, like taxation, including both the FBT and the LCT, also have a significant role in driving consumer behaviour.

This is the approach taken in other jurisdictions as well. Norway continues to lead the world with the uptake of EVs in its national fleet. The integrated nature of Norway's policy framework for decarbonising its national vehicle fleet has enabled the country to achieve significant EV uptake. More than 82% of new car sales in 2023 were EVs. 19 This has been no accident.

Pushing on a hard goal of zero tailpipe emissions by 2025 has necessitated a raft of policy measures targeted at both supply and demand. Building consumer demand through concessions on registration tax and VAT (Norway maintains zero registration tax and no VAT on electric vehicles) has stimulated demand while at the same bringing new EV entrants to the market, increasing both supply and consumer choice.

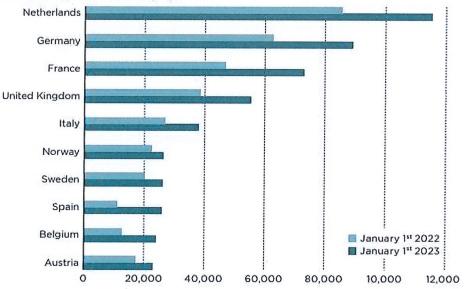
¹⁸ https://www.drive.com.au/news/best-selling-electric-cars-2023-full-year/

¹⁹ https://youtu.be/R5DbRyeZNRk?si=h2ntCVOTYKG4Cyv9

21

This has undoubtedly been assisted by public support, and government funding for, accessible charging points. Norway boasted 14.5 publicly accessible charging points per thousand vehicles in 2021, more than seven times the EU average, while the Netherlands had eight points per thousand vehicles.²⁰





Current debate in the United Kingdom has seen the Society of Motoring Manufacturers and Traders (SMMT), the peak body for the automotive industry in that country, advocate for a halving of the VAT on new BEVs for a time limited period of three years. This is driven by the current market split for EV sales. BEVs accounted for one in six new cars registered in 2023, the majority being taken by business and fleet buyers who benefit from compelling tax incentives. This is compared to one in 11 private buyers choosing a BEV. BEV sales are up 21% in January 2024 compared to the same period last year.²² The UK is the only European market with mandated minimum targets for new zero emissions vehicle registrations.

²⁰ https://eupocketbook.org/wp-content/uploads/2024/01/Pocketbook 202324 Web.pdf

²¹ https://eupocketbook.org/wp-content/uploads/2024/01/Pocketbook 202324 Web.pdf, p.7

²² https://www.smmt.co.uk/vehicle-data/evs-and-afvs-registrations/

This temporary cut would give private consumers access to fiscal support at a level similar to that enjoyed by business buyers, enabling manufacturers to deliver larger volumes of zero emission vehicles. Combined with a retention of the business incentives that have already proven their value in increased EV uptake, the measure would accelerate the UK's market transition. More drivers would upgrade their existing petrol or diesel car to a new zero emission alternative, widening the future supply of used electric vehicles and making investment in chargepoint rollout even more compelling. [emphasis added]²³

The SMMT argues that the Treasury VAT windfall from a 20-fold increase in BEV sales because of their current higher purchase costs than comparable ICE vehicles, and that halving VAT would significantly increase EV buying power, while only reducing the Treasury's tax take by 22% per vehicle for each additional driver switching from an ICE to a BEV.

Significantly, the SMMT argue this would put 1.9 million new EVs on the road by the end of 2026, in turn delivering a profound step change for the UKs carbon footprint and reducing road vehicle emissions by more than five million tonnes cumulatively over the next three years.

Polestar supports the additional measures proposed by the EV Council, namely that the Government should:

 Immediately commit to allowing the direct acceptance of typeapproved low/zero-emission vehicles from major global markets in full volume supply. This reform is critical for ensuring car makers can bring global models to Australia as quickly as possible. Unique Australian standards that are not consistent with similar international markets (EU, US, Japan), increase the regulatory burden and cost of importing new models and will slow our transition to a more efficient vehicle fleet for no demonstrable increase in safety.

 $^{^{23}}$ $\underline{\text{https://www.smmt.co.uk/2024/01/new-car-market-delivers-best-year-since-2019-as-fleets-fuel-growth/}$

2. Work with the states and territories to address the premature withdrawal of consumer incentives for EVs. Collectively, Australian governments need to continue to actively support EV adoption until sales approach 30% of new vehicles – in line with international experience. These incentives should be targeted and could be means-tested - similar to the Queensland ZEV rebate.

Explore opportunities to support mechanics, car dealers and other service providers as Australia transitions to a zero-emission vehicle fleet over the coming 25 years. This could include support such as skills and training support, and investment in infrastructure.

Conclusion

As a small part of a global automotive industry, the Australian new vehicle market lags the rest of the developed world in the implementation of a vehicle emissions standard. The establishment of a robust, credible and globally competitive NVES is an important first step to decarbonise the Australian transport sector and the Government is to be commended for its ambitious but achievable proposed target. Passenger vehicles and LCVs make up over 10% of Australia's total emissions²⁴ and play an integral role in achieving Australia's stated national emissions reduction commitments to 2030 and beyond to Net Zero by 2050.

This is not a difficult undertaking for Australia. There is no domestic automotive manufacturing capability that needs to be accommodated; rather we are a nation solely reliant on imported light vehicles. The opportunity is ours to take already well-established technology applied in new vehicle markets elsewhere around the world and apply it here. The NVES will enable that to happen. Delaying implementation only makes other sectors of the economy wear an additional burden. And it will only ensure that Australia continues to be a dumping ground for old technology.

With the right policy settings through the establishment of a strong NVES, the Australian Government can join the rest of the developed world to drive down tailpipe emissions.

²⁴ https://www.dcceew.gov.au/energy/transport

The significance of this cannot be understated – as the University of Melbourne has identified, the health impacts from vehicle emissions may contribute to more than 11,000 premature deaths each year, and a further 12,000 cardiovascular hospitalisations each year.²⁵

Polestar looks forward to working with the Government to deliver a more efficient and decarbonised national passenger motor vehicle fleet.

 $^{^{25}\,}https://www.unimelb.edu.au/newsroom/news/2023/february/vehicle-emissions-may-cause-over-11,000-deaths-a-year,-research-shows$